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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,166	07/25/2003	Charles E. Price	046478/263692	2507

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EXAMINER

MARCANTONI, PAUL D

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,166

Applicant(s)

PRICE, CHARLES E.

Examiner

Paul Marcantoni

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-18,20-27 and 29-43 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3-18,20-27 and 29-43 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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The applicants' 2/7/05 amendment and response is acknowledged yet it is not found persuasive.

35 USC 102/103 Rejection:

Claims 1, 3-18, 20-27, and 29-43 remain rejected under 35 USC 102 (a and b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Hopkins et al. '075, Nisnevich et al. '751, Shulman '547 B2, Doty et al. '446, Brewer et al. '950 or '261, JP 61021940 (Hironaka et al.), DD 157092 (Kornemann et al.), Berg et al., Ghafoori et al., Lai et al., or Eun et al. (WO 8600290).

The applicants' insertion of specific values of compressive strengths into claim 1 necessitated the following ground of rejection because before that it was assumed that any amount from greater than zero to 100 wt% for each component as long as both add up to 100 wt% would be considered an effective amount.

35 USC 112 First Paragraph:

Claims 1, 3-18, 20-27, and 29-43 are rejected under the first paragraph of 35 USC 112 as they are not commensurate with an enabling disclosure nor ~~do~~ they enable one of ordinary skill in the art to make or practice their invention.

There are no amounts of bottom ash, cement (nor the specific type-is it hydraulic, Portland cement, alumina cement, Magnesia cement, phosphate cement, gypsum, etc.) and water that are critical to obtain the claimed values for compressive strengths. There are no examples showing how to make or practice this invention. Further, for the ranges of amounts given in the specification, none of them clearly points out which particular range leads to what compressive strength. There is just a listing of

Art Unit: 1755

statements as to what compressive strengths that can be achieved but no guidance as to how much of each components, what type of cement specifically, particle size, conditions of curing (is it heated, cured in air, vacuum?, etc) to lead to these compressive strengths. Thus, one of ordinary skill would have not been able absent burdensome trial and error to figure out exactly how to make or practice applicants claimed invention and obtain their claimed compressive strengths. It is also noted that the weight of the entire package is non-enabled as well because it still is not clear how much of cement and bottom ash are critical to lead to the lightweight properties as claimed. Certainly, minute amounts of bottom ash (e.g. 0.1 wt%) and 99.9 wt% cement such as Portland cement will not lead to a lightweight package and it seems impossible that applicants can say any amount is an effective amount and will lead to a lightweight property. The only way around this issue was to actually provide the critical amounts of components (including the specific type of cement used) that enable one of ordinary skill in the art to achieve a lightweight cement mix of high compressive strength. It is improper to claim a compressive strength in a claim without actually providing the amounts that get one that compressive strength. Without specific amounts, applicants are basically saying that any amount from zero to 100 wt% suffices and will obtain their compressive strengths which is highly ~~improbable~~ ^{improbable} if not possible.

35 USC 112 Second Paragraph:

Claims 1, 3-18, 20-27, and 29-43 remain rejected under 35 USC 112, second paragraph, as failing to set forth the subject matter the applicant(s) regard as their invention.

The terms "effective amounts" for bottom ash and cement remain indefinite. What are the effective amounts of each component of the claimed composition to obtain the now provide compressive strengths in the independent claims? Applicants did not provide any ranges of amounts and to say that any amount from a minute quantity of either bottom ash and/or cement and a enormous amount of either fly ash and/or cement will not lead to the alleged compressive strength results claimed nor will any amount lead to a lighter cement composition. If the composition contains 99 wt% cement and 1 wt% bottom ash, how is that lightweight? Further, by applicants usage of "effective" claim language in claim 1, what they are saying is that any amount from 0 to 100 wt% for bottom ash and any amount from 9 to 100 wt% will lead to their claimed compressive strengths. It is also noted that nowhere in the specification is there any support for how to even make or enable one of ordinary skill in the art to obtain the claimed compressive strengths. There are no examples nor are their any specific statements of amounts that lead specifically to the compressive strengths of the independent claims. There is thus no guidance for one of ordinary skill in the art. One must assume by applicants claim language that any amount can obtain their alleged compressive strengths. It is even noted that there is no support from the original

disclosure that the range of amounts of, for example, claim 6 of bottom ash and cement in a ratio of 2:1 to 2:3 will lead to the compressive strengths of claim 1.

Response:

The applicants request the rejection under 35 USC 112 second paragraph be withdrawn. That request is denied in view of the comments above. Further, the specification is critically lacking in any alleged guidelines on how to make or achieve this compressive strength. Please point out specifically from the specification an example or any particular literal support that says a specific amount of bottom ash, water, and cement lead to the compressive strengths of the independent claims such as claim 1. Further, does any kind of cement achieve this compressive strength? By what is claimed, it means any cement (including non-hydraulic cement potentially) should achieve this compressive strength which is impossible. It also means that gypsum, plaster, alumina cement, Portland cement, Magnesia cement, etc. Blast Furnace slag cement, etc. all would lead to the claimed compressive strength and there is no sufficient experimental evidence or support for that from the original disclosure.

The applicants also argue the prior art such as Hopkins '075 noting that he teaches "ground" bottom ash. In rebuttal, where is there any limitation in applicants own claims that their bottom ash is not ground? It is improper to argue limitations applicants themselves do not have in their own claims.

The applicants also argue the preferred embodiments. Yet, a reference is good for all that it realistically teaches and is not limited to the preferred embodiments wherein it teaches the addition potentially of silica fume. The applicants have not shown

Art Unit: 1755

that the presence of silica fume would materially affect in a deleterious manner from the compressive strength. Further, if it were removed, it would be a composition of bottom ash and Portland cement (note applicants themselves do not even claim their own cement is Portland cement) which meets the limitations of applicants own claimed composition. Even if it is alleged the compressive strength drops, it is still the same composition as claimed by applicants and would have been expected to have the same properties. It is also noted that applicants provide no experimental evidence or data showing that Hopkins '075 would not also have a compressive strength within their claimed range even without silica fume. For that matter, the applicants have not even shown one example (there are no examples in the applicants' specification) of their own showing the specific ranges of amounts, the specific type of cement (Portland cement or something else??) specific properties, or any other parameters that must be obtained before their claimed compressive strength can be met..

The applicants also state that Nisnevich '751 teach away from their invention because they only teach a 28 day compressive strength of 4.9 MPa (710 psi). In rebuttal, the applicants do not provide the specific amounts to obtain their compressive strengths nor is any amount provided in the specification to obtain their claimed compressive strengths. Absent amounts, the effective amounts as stated in the independent claims do not contain a specific range of amounts and without a critical range of amounts of bottom ash, cement (what kind!) and water, the applicants' claimed compressive strength cannot be achieved.

The remaining references of the rejection also all teach a composition comprising cement and bottom ash and because applicants refuse to provide specific amounts of components, the amounts of these references are also effective amounts and would lead to the claimed compressive strengths absent evidence to the contrary. Applicants are also invited to provide their own data as to how they achieved their own compressive strengths including type of cement, amount of cement, amount of bottom ash, amount of water, critical particle size, etc. that is necessary to obtain their compressive strengths. Since these critical amounts and parameters are missing from the independent claims, it is improper for applicants to argue a compressive strength without the amounts of each component and other parameters that helped them obtain that.

The applicants also argue that none of the references teach using a package (paper or plastic, etc.) and obtaining a lightweight product as they claim. Yet, it is the examiner's position that one of ordinary skill in the art would have understood to control the requisite amounts of the lightweight material (bottom ash) to cement ratio to control weight in commercial packaging and still obtain minimum strength properties for sales.

The applicants also argue "consisting essentially of" as teaching away from the references of the rejection. In rebuttal, In re Delajarte states that the applicants have the burden to show that the presence of these other components materially affects (likely in a deleterious manner) the claimed invention. It is noted that extra components outside applicants own invention such as silica fume (e.g. Hopkins patent) is ultralightweight and should not affect the ability to make a lightweight packaged cement mixture nor

does it decrease compressive strength but actually enhances it. The burden is upon applicants to show the presence of these components materially affect their invention and so far they have only provided arguments that it does so without the benefit of experimental support, declarations under 37 CFR 1.132, etc., data sheets, etc. showing that this is the case. Simply providing arguments that the presence of these other components materially affects does not satisfy applicants' burden for a showing of materially affecting.

For the above cited reasons, the finality of this office action is now proper.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

Art Unit: 1755

supervisor, Jerry Lorengo, can be reached at 571-272-233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Marcantoni
Primary Examiner
Art Unit 1755